TECHNICAL QUALIFICATIONS FOR

Statewide On-Call Preliminary Engineering Prequalified List of Consultants for Locally Administered Local Public Agency (LPA) Qualifications-Based Selection Contracts

November 23. 2022

TABLE OF CONTENTS

Introduction Letter 2

Project Understanding & Approach 3

Organizational Chart 5

Project Team 6

References 8

Appendix 9

- Resumes 9
- Work Experience 20

Section 1
- Introduction Letter

GPI

Greenman-Pedersen, Inc.
Engineering | Design | Planning | Construction Management

November 23, 2022

Mr. William J. Oldenburg, P.E.
Assistant Director of Project Development
Chairperson, Consultant Selection Committee
New Hampshire Department of Transportation
P.O. Box 483, 7 Hazen Drive
Concord, NH 03302-0483
William.Oldenburg@dot.nh.gov

Re: **Letter of Interest – Statewide On-Call Call Preliminary Engineering Prequalified List of Consultants for Locally Administered Local Public Agency (LPA) Qualifications-Based Selection Contracts**

Dear Mr. Oldenburg:

Greenman-Pedersen, Inc. (GPI) provides highway and bridge design engineering services to local public agencies throughout New England and is seeking prequalification for LPA projects with the New Hampshire Department of Transportation (NHDOT). We are currently designing a replacement bridge along Valley Cross Road for the Town of Jackson. GPI completed conceptual, preliminary, and final design in addition to construction phase services for a Safe Routes to School project along Lafayette Road/Middle Street in Portsmouth. This was a unique project since it represents the first protected bicycle lane installation in the State of New Hampshire, which provides a facility that caters to bicyclists with the broadest of abilities and protects children as they bike to school on a busy street. These two examples illustrate some of the wide-ranging experience we have in New England in working with LPAs to design highway and bridge improvements.

We understand that LPA assignments may vary and could involve smaller-sized roadway projects, bridge design, bridge inspection, structure evaluation, right-of-way plans, guardrail replacement, '3R'' (resurfacing, restoration and rehabilitation) paving projects, culvert rehabilitation or replacement, signing contracts, and intersection safety improvement projects. The enclosed information demonstrates our ability to complete these types of projects, which we have done successfully within New England for over 40 years.

We appreciate your consideration and look forward to continuing our relationship with NHDOT and to work alongside familiar communities in addition to new ones in the future. If you have any questions, please feel free to contact me at 603-766-8259 or by email at tletton@gpinet.com.

Best regards,

GREENMAN-PEDERSEN, INC.

Timothy Letton, PE
Executive Vice President / New England Branch Manager
116 South River Road, Building B, Suite 1
Bedford, NH 03110

Section 2

-Project Understanding & Approach

SECTION 2:

PROJECT UNDERSTANDING & APPROACH

GPI has broad capabilities and experience in highway and bridge design that ranges from complicated interstate highway projects to localized sidewalk improvements. Whatever the size, we give careful attention and consideration to each assignment, seeking to improve transportation excellence in the state. We understand the limited funding that many communities in New Hampshre face and provide quality and practical designs that promote safety, mobility, value, and constructability. We are also mindful of the needs of the community and understand the care they have for the projects.

Preliminary and Final Design and Preparation of Contract Documents

The effort that we put into producing high quality plans, estimates, and specifications for these projects facilitates successful construction and infrastructure longevity. GPI has brought hundreds of highway and bridge design projects in New England communities from the initial concept development through the completion of punch list items.

HIGHWAY DESIGN

New Roadways and Rehabilitation of Existing Roadways: GPI is experienced in the design of new roads, highway realignments, and the rehabilitation of existing streets. We understand the complexities and interactions between roadway geometry, stakeholder interests, utilities, drainage, roadside design, mobility, safety, and access management.

Intersection Improvements and Signalization: We routinely provide traffic engineering solutions for communities. Intersections require careful planning since they represent a facility where the potential for conflict is greatest. Whether it is improving safety at a school crossing, optimizing a traffic signal, or designing geometric improvements to provide traffic calming, GPI engineers have extensive knowledge of all areas of intersection analysis, concept development, and design to improve safety and increase capacity.

Sidewalks, Trails, Bicycle Lanes, Alternative Transportation Facilities, and Complete Streets: GPI continues to be very involved in the design of complete streets projects, sidewalks, trails, and bicycle lanes. We consider the context of all projects and the planning framework so that proposed multi-modal accommodations are consistent with the client's long-term goals and vision. GPI has also designed many actuated flashing beacons to improve awareness/safety at pedestrian/bicycle crossings and designed the first protected bicycle lanes to be implemented in the state of New Hampshire. The recent design of the Maplewood Avenue project in Portsmouth exemplifies our ability to deliver a complete streets design for a New Hampshire municipality within a residential neighborhood setting.

Review of Development Drive Requests and Traffic Impact Studies: Many towns and cities throughout New England have turned to GPI for peer reviews of these items based on our in-house traffic engineering expertise. These reviews include a comprehensive assessment of the analysis, assumptions, recommendations, and mitigation proposed for the projects. In addition, GPI often provides a design quality assurance and quality control of proposed construction documents for associated mitigation. We are intimately familiar with the requirements of NHDOT when it comes to a peer review of these studies.

Planning Level Corridor Studies: We regularly perform corridor studies that seek to identify the types of transportation improvements that are most effective in enhancing safety and mobility for all users while balancing these improvements with local resources, needs, and community vision. These efforts involve a range of traffic engineering and analysis, geometric design, planning, and public outreach.

BRIDGE DESIGN

Bridge Preservation, Rehabilitation, and Replacement: We understand and follow the NHDOT processes for bridge design projects including the type, span, and location study; the engineering report; preliminary design; and final design. The process is tailored to each project's scope, whether it be preservation, rehabilitation, or replacement. We are currently working on an LPA bridge project for the Town of Jackson (**17097**). Our recent bridge designs for NHDOT, **Littleton 42376**, **Bedford-Manchester 40731**, and **Jackson 27709,** show our range of New Hampshire experience from interstate highways to smaller, local bridges.

Bridge Inspection and Ratings: With certified NBIS team leaders and staff, GPI is prepared to conduct bridge inspections for local communities and NHDOT. In addition to the traditional approach, our FAA certified pilot has performed bridge inspections

with our Unmanned Aircraft Systems (UAS) and used thermal imaging to evaluate concrete decks. We have completed countless bridge ratings for many DOTs utilizing AASHTOWare software, hand calculations, spreadsheets, MDX, STAAD, and other tools to determine the load capacity of a wide variety of structure types.

Scour Countermeasures and Substructure Protection: We have experience with scour analysis and countermeasure design and understand how to use engineering judgement when interpreting the scour results so that they are reasonable, do not dictate the bridge design, and are in concert with environmental restrictions. GPI is also experienced with the permitting process required to dewater streams for scour repair, which often involves placement of natural streambed material onto rip rap for restoration of the aquatic environment to pre-construction conditions.

ADDITIONAL WORK EFFORTS

Project Management Services: GPI is prepared to provide project management services to the Department and municipalities as it plans to do for the **Hampton-Portsmouth Seacoast Rail Trail (26485)**. We are also comfortable providing coordination between municipalities and NHDOT as we do with typical design projects.

Environmental: GPI will utilize our in-house environmental expertise to provide resource identification and impact assessment, NEPA documentation, and permitting services. Coordination with resource agencies, the NHDOT Bureau of Environment, local officials, and state and federal agencies is an important part of the process and will be handled by the project manager working together with environmental staff. **Nobis Group (Nobis)** will assist GPI in the areas of hazardous materials and contaminated soil management.

Traffic Control Design: For the **Enfield 40526** culvert replacement study project, GPI provided traffic analysis for alternative maintenance of traffic conditions during construction. A detour analysis and an alternating one-way analysis, both with multiple options, were developed and presented to the Department to aid in the decision-making process. GPI's traffic analysis capabilities have also been critical to the recently completed **I-293 over Merrimack River bridges**. We also designed the traffic control for **Littleton 42376** and **Jackson 27709**, both of which are in construction and involve the use of traffic signals.

Hydraulic Calculations: GPI performs hydrologic and hydraulic analyses using NHDOT standard procedures described in the latest NHDOT drainage and bridge manuals as well as guidance from FHWA.

GPI understands how to complete 1-D, 2-D, and 3-D hydraulic analyses and when each is most appropriate.

Overhead Sign Structure and Retaining Wall Design: GPI is an industry leader in understanding overhead sign and ancillary structures, demonstrated by the fact that GPI staff teaches the **NHI 130087 Inspection and Maintenance of Ancillary Highway Structures** course. Our understanding of the in-service behavior of these structures allows us to pick up details during shop drawing review that will promote long life and low maintenance. GPI also routinely provides retaining wall designs for highway and bridge projects, ranging from small back of sidewalk walls to large slope retaining walls.

Technical Writing: GPI has recently completed writing assignments for **Plaistow-Kingston 10044E** (culvert evaluation report) and **Enfield 40526** (culvert replacement evaluation report and hydraulics report). GPI provided technical writing support to the MassDOT Right-of-Way (ROW) Bureau for the recently issued manual titled *Plan Preparation Guidelines for Consultants Preparing Right-of-Way Plans*. We are also accustomed to preparing the engineering reports required as part of the NHDOT Design process.

Geotechnical: Nobis will assist GPI with geotechnical services. Nobis is experienced in providing subsurface exploration services, soil and rock laboratory testing, foundation recommendations, design calculations, contaminated soil management, hazmat services, and special provisions and/or specification preparation support.

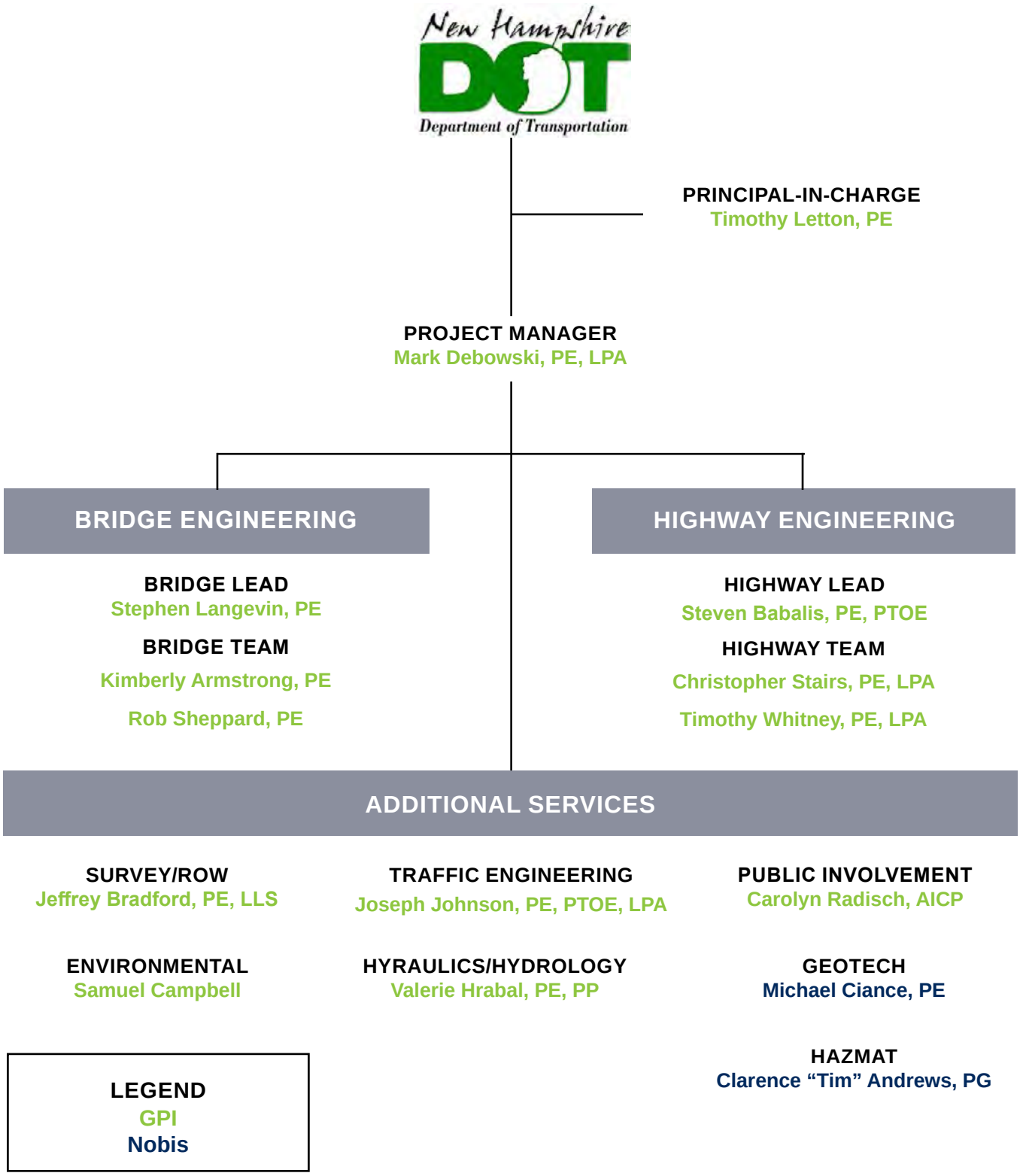
Survey and Right-of-Way: GPI has the in-house capability to perform all necessary work under the supervision of a New Hampshire Licensed Land Surveyor to produce topographic surveys, right-of-way plans, recordable property taking plans and deed documents for the acquisition of property interests.

Public Involvement: GPI has considerable experience with public engagement and has an array of tools that can be deployed to assist the Department during the public involvement process. GPI is highly involved in the ongoing public involvement process for the **NH Rail Trail Plan (Statewide 42794)**.

Section 3
- Organizational Chart

SECTION 3:

ORGANIZATIONAL CHART



Section 4
- Project Team

SECTION 4:

PROJECT TEAM

COMPANY OVERVIEWS

GPI is a multidiscipline engineering firm with 1,700+ employees in over 60 offices nationwide working every day on transportation projects since 1966. Our local office in Bedford, New Hampshire is currently home to 20 full-time professionals, and continues to expand. GPI's Bedford office is part of our New England core, which includes New Hampshire offices in Portsmouth and Salem, and Massachusetts offices in Wilmington and Boston. Additionally, we have an office in Portland, Maine. These offices geographically complement one another and allow us to be responsive to all of the New Hampshire Department of Transportation's (NHDOT) six district areas.

We have been working with multiple Bureaus of NHDOT on construction and coatings inspection assignments and various on-call agreements for nearly two decades. Throughout this long-standing relationship, GPI has gained a reputation for being a responsive and trustworthy firm that collaboratively works to develop solutions.

Nobis Group (Nobis) will assist GPI and NHDOT with geotechnical services as needed. For each applicable highway assignment, Nobis can provide subsurface exploration services, soil and rock laboratory testing, contaminated soil management, hazmat services, foundation recommendations, design calculations, and special provisions and/or specification preparation support.

PERSONNEL/RESOURCES AVAILABLE

The key personnel anticipated to work on this project are highlighted on the following page. More detailed resumes can be found in the Appendix.

Highway and Bridge Design Engineering Projects in Support of LPA Projects		Years of Experience	Years with Firm	Project Management	Highway Design	Bridge Design	Structural Engineer	Alternative Procurement Methods	Corridor Study Planning	Bridge Inspection	Bridge Load Rating	Hydraulics\Hydrology	Environmental	Traffic Analysis	Geotechnical Engineer	Surveyor	Public Involvement	NH LPA Certified
Key Personnel	Project Role																	
Timothy Letton, PE	Principal-in-Charge	21	21					•										
Mark Debowski, PE	Project Manager	17	3	•	•			•	•								•	•
Steven Babalis, PE, PTOE	Highway Lead	16	3		•				•					•				
Stephen Langevin, PE	Bridge Lead	22	10			•	•			•	•							
Christopher Stairs, PE	Highway Engineer	15	11		•													•
Timothy Whitney, PE	Highway Engineer	9	3		•													•
Kimberly Armstrong, PE	Bridge Engineer	22	13			•	•			•	•							
Robert Sheppard, PE	Bridge Engineer	11	8			•	•				•							
Joseph Johnson, PE, PTOE	Traffic Engineer	25	24		•				•					•			•	•
Jeffrey Bradford, PE, LLS	Survey/ROW	38	38													•		
Valerie Hrabal, PE, PP	Hydraulics/Hydrology	46	22									•						
Samuel Campbell	Environmental Scientist	5	5										•					
Carolyn Radisch, AICP	Public Involvement	33	8						•								•	
Michael Ciance, PE	Geotechnical Engineer	31	7												•			
Clarence "Tim" Andrews, PG	Hazardous Materials	25	23										•					

KEY PERSONNEL

Management Team

Timothy Letton, PE - Principal-in-Charge: Regional leader overseeing multiple local public and state agency projects, including NHDOT contracts. Registered Professional Engineer in New Hampshire.

Mark Debowski, PE, LPA - Project Manager: Highly developed communication and project management skills. Currently managing NHDOT highway on-call projects. Registered Professional Engineer in New Hampshire and **holds current NH LPA certification.**

Highway/Roadway Design

Steven Babalis, PE, PTOE - Highway Lead: Extensive experience with traffic operations analysis, highway geometry and traffic control plans. Excels at developing innovative solutions to complex problems. Has worked on a variety of NHDOT projects and is a Registered Professional Engineer in New Hampshire.

Christopher Stairs, PE, LPA: Has design experience with a wide variety of roadway projects such as local public agency roadways, highways and bike paths. **Holds current NH LPA certification.**

Timothy Whitney, PE, LPA: Skilled in roadway design, municipal roadway work, utility coordination and construction oversight for both local public and state agencies. Registered Professional Engineer in New Hampshire and **holds current NH LPA certification.**

Bridge Design

Stephen Langevin, PE - Bridge Lead: Extensive bridge design experience on projects for local public and state agencies. A former NHDOT Bridge Bureau employee actively managing and working on NHDOT projects. Currently managing the Valley Cross Road Bridge project in Jackson, an LPA project. Registered Professional Engineer in New Hampshire.

Kimberly Armstrong, PE: Diverse experience in bridge design for municipalities and state agencies. Has also managed numerous bridge ratings and rehabilitation projects ranging from steel and concrete bridges to trusses and stone arches. Registered Professional Engineer in New Hampshire.

Robert Sheppard, PE: Experience includes bridge design, ratings, and construction services for bridges in New Hampshire and Massachusetts. Key roles on Jackson 27709, Bedford-Manchester 40731 and Littleton 42376 projects and is currently working on the Valley Cross Road Bridge project in Jackson, an LPA project.

Traffic Engineering

Joseph Johnson, PE, PTOE, LPA: Diverse experience in roadway, traffic, and "complete streets" design. Presents projects at public hearings, is involved in roadway improvement projects and design of bicycle accommodations. Managed LPA projects in New Hampshire. Registered Professional Engineer in New Hampshire and **holds current NH LPA certification**.

Survey/ROW

Jeffrey Bradford, PE, LLS: Has 37 years of experience performing survey and right-of-way services at GPI for both local public and state agencies. Registered land surveyor in all New England states including New Hampshire.

Hydraulics/Hydrology

Valerie Hrabal, PE, AICP: Expertise in flood plain hydraulics, design of stormwater management, and best management practices. Registered Professional Engineer in New Hampshire.

Environmental

Samuel Campbell: Experienced in various environmental services required for transportation design projects.

Public Involvement

Carolyn Radisch, AICP: Significant depth of experience in public engagement and as a certified planner.

Geotechnical Engineering & Hazardous Materials - Nobis

Michael Ciance, PE: Registered Professional Engineer in New Hampshire. Over 30 years of geotech experience including local projects in New Hampshire.

Clarence "Tim" Andrews, PG: Registered Professional Geologist in New Hampshire. Over 24 years of geotech experience including local projects in New Hampshire.

Section 5
-References

SECTION 5:

REFERENCES

Mr. Raymond C. Pezzullo
Assistant City Engineer
City of Portsmouth DPW
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603-766-1755
rcpezzullo@cityofportsmouth.com

Ms. Julie Atwell
Town Administrator
Town of Jackson
54 Main Street
Jackson, NH 03846
603-383-4223x101
townadmin@jackson-nh.org

Mr. Paul C. Branscombe
Town Administrator
Town of New Boston
7 Meetinghouse Hill Road
New Boston, NH 03070
603-487-2500 x121
p.branscombe@newbostonnh.gov

Section6

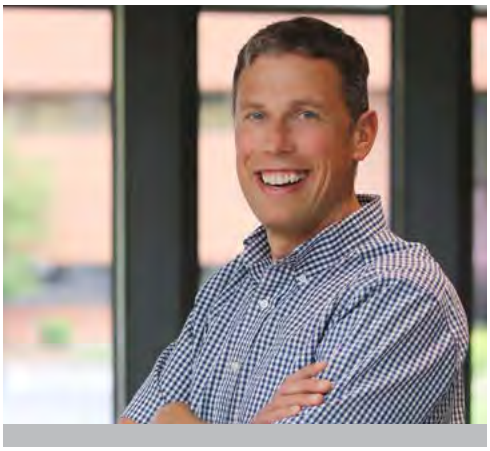
-Appendix:

Resumes & Applicable Work Experience

Resume

Mark J. Debowski, PE

Assistant Vice President/Director of Highway Engineering



PROPOSED PROJECT ASSIGNMENT: Project Manager

EDUCATION:
MBA/2020
ThM/2005
MDiv/2005
BS/2000/Civil Engineering
BA/2000/Liberal Arts/Engineering

REGISTRATIONS/CERTIFICATIONS:
2005/Professional Engineer/ME #10940
2006/Professional Engineer/PA #73762
2012/Professional Engineer/NH #13899
2018/Professional Engineer/MA #40086
NHDOT LPA Certification #1900
MaineDOT LPA Certification

YEARS WITH FIRM: *3*
TOTAL YEARS' EXPERIENCE: *17*

COURSEWORK/TRAINING:
MaineDOT ADA Compliance (Co-Taught)/ 2019
TRB Geometric Highway Design Process for the 21st Century / 2017
FHWA Performance Based Practical Design / 2016
FHWA Intersection and Interchange Geometrics Workshop / 2016
FHWA 3D Engineered Models for Construction Workshop / 2014

PROFESSIONAL AFFILIATIONS:
NHDOT/ACEC-NH Highway Design Subcommittee, Member

Project Experience

Maine Route 100/26 Infrastructure Improvements, Falmouth, Maine; 2015-2019. LPA Project Manager. One the largest and most complex LPA projects completed recently in Maine at a construction cost of $12 million. Involved highway reconstruction and widening; proposed sewer, water, and natural gas; landscaping; lighting; designed improved experience for all road users; two signalized intersections. The project included a neighborhood planning study for the town, and the goal of these infrastructure improvements is to create a neighborhood atmosphere and spur development. *Client: Town of Falmouth*

Route 4 Culvert Study, Enfield, NH; 2020. Project Manager. Provided an evaluation of alternatives to replace an open-bottom culvert in poor condition conveying the Huntoon Brook under US-4. The assessment culminated in an evaluation report that included bridge design alternatives; highway approach design alternatives; temporary traffic control analysis with detour, diversion, and alternating one-way traffic options evaluated; environmental considerations; and construction cost estimates of the alternatives. *Client: NHDOT*

NH Statewide Rail Trail Plan, NH; 2020-Present. Project Manager. Providing updates to the 2005 state trails plan to ensure preservation and integrity of the state-owned rail corridors, provide direction for future development, define the role of NHDOT in the preservation of state-owned rail corridors, determine the best way to maximize the return on investment in rail corridor assets, and determine how to engage towns, cities, and private rail-trail organizations. Responsible for managing the plan development and extensive communication and coordination with NHDOT and various stakeholders including an advisory committee. *Client: NHDOT*

Downtown Pedestrian and Vehicular Improvements, Dover, NH; 2022-Present. Project Manager. Providing design services for improvements to the vehicular, transit, bicycle, and pedestrian flow in the downtown area in the City of Dover. Several key intersections are being modified, placemaking and landscaping improvements are being implemented, and streets are being modified from one-way to two-way traffic flow. Responsibilities include design team leadership, quality control, and client communication. *Client: City of Dover*

Betts Road and Cross Road Intersection, Rochester, NH; 2021-Present. Project Manager. Realigning the intersection legs and reconstructing the intersection at a high crash location. Designing a solution that negotiates nearby overhead and underground utilities, residences in close proximity, and narrow right-of-way while providing substantial sight distance improvements. Responsibilities include design oversight, quality control, and client communication. Client: *City of Rochester*

Seacoast Greenway, Hampton-Portsmouth, NH; 2021-Present. Project Manager. Converting abandoned railroad corridor to ten-mile multi-use trail to become part of the East Coast Greenway. The project includes extensive survey and field reviews, reestablishing the right-of-way, reconstruction of portions of the rail bed, bridge rehabilitation, culvert replacements, significant upsizing and replacement of a closed drainage system, and thorough public coordination. Responsibilities include project oversight, client and public communication, and creative problem solving for unique design challenges. *Client: NHDOT*

GPI

Offsite Improvements for Proposed Warehouse Development, Kingston, NH, 2021-Present. Project Manager. Providing transportation engineering and consulting services for major off-site improvements associated with the proposed warehouse/distribution center recently approved at 266 NH Route 125 in Kingston, NH. Improvements include widening from two to five lanes and lowering the profile of the highway by as much as six feet to improve sight distance. As part of the approval of the project, fully-actuated traffic signals at the intersection of NH Route 125/107 at NH Route 107 (Marshall Road) will be designed and installed. In addition, turn lanes are required on NH Route 125 at the proposed northern and southern site driveways to accommodate turning movements into the site. Work includes preparing/filing of a NHDOT Application for Driveway Permit, conducting survey, and preparing construction documents for off-site improvements associated with the distribution center including the new signal at the intersection of NH Route 125/107 at NH Route 107. Responsibilities include development of traffic mitigation plans and alternative analysis along Route 125. *Client: NHDOT*

Statewide Tier 2 Resurfacing, Various Locations, NH; 2021-Present. Project Manager. Providing design services for ten pavement resurfacing locations, divided into four proposal packages, totaling 28 miles. Taking a new approach to the design of these projects by using drone imagery to develop base plans and provide the basis of quantity calculations. Also utilizing our construction inspection experience with NHDOT resurfacing projects to incorporate lessons learned from the field. The projects include pavement rehabilitation, guardrail upgrades, drainage improvements, and ADA ramp construction. Responsibilities included design calculations for guardrail, development of plans, specifications, and estimates in addition to project management and quality control. *Client: NHDOT*

Route 1 North Complete Streets Improvements, Falmouth, ME; 2020-Present. Project Manager. Developing preliminary design for two miles of bicycle lane, shared-use path, and sidewalk improvements on US Route 1 and Johnson Road in Falmouth. The intersection of Route 1 and Johnson Road is being modified from a signalized intersection to a single-lane roundabout. The interchange of Route 1 and the Falmouth Spur is being redesigned as a roundabout. Sanitary sewer upgrades are incorporated into the roadway design. Lighting and landscaping enhancements are also proposed for the Route 1 corridor. Responsibilities include all project communication, quality control, design team leadership, and coordination with the town and MaineDOT. *Client: Town of Falmouth*

Town-Wide Pavement Evaluation and Roadway Maintenance and Reconstruction Plan, New Boston, NH; 2020-Present. Project Manager. Volunteer as Chair of New Boston Road Committee. Using PCI rating standards evaluated all 60 miles of paved roads in town and developed a long-term plan for road maintenance and reconstruction to assist the town selectmen. *Client: Town of New Boston*

Turnpike Street/Route 139 Reconstruction, Stoughton, MA; 2019-Present. Project Manager. Providing engineering design services for the reconstruction of a portion of Turnpike Street (Route 139) that has been sinking and shifting significantly due to a thick peat layer underground. The improvements include a pile-supported buried structure to support the proposed highway and eliminate future settlement. Overcame significant construction cost and traffic obstacles associated with the previously accepted idea of using local roads for a detour route by designing the proposed roadway on a new alignment and using the existing roadway for traffic during construction. The change in design was warmly accepted by MassDOT and the town as a great idea. Significant environmental permitting, subsurface investigations, and right-of-way work are part of the project. Responsibilities include project oversight, communication, and quality control. *Client: MassDOT*

Culvert Evaluation, Bow, NH, 2021. Provided culvert evaluation for a submerged 18” BCCMP as part of the Bow 42704 project. Led an inspection team of four engineers along with a remote crawler (Pearpoint P350 Flexitrax) to evaluate the culvert to determine its suitability for remaining in service. From the inspection, a culvert condition report was developed along with recommendations. *Client: NHDOT*

Route 28 Corridor Reconstruction, Falmouth, MA; 2020-2021. Project Manager. Designing improvements over three miles of state highway in an urban and suburban environment to improve intersection operations and safety, provide complete streets design for multiple types of roadway users, and balance transportation improvements with the residential community concerns. Responsibilities included coordination with MassDOT, town staff, and community members; design oversight; and quality control. *Client: MassDOT*

Valley Cross Road Bridge Rehabilitation, Jackson, NH; 2019-2021. Quality Assurance. Providing design services for the rehabilitation of the municipal red-listed bridge carrying Valley Cross Road over Wildcat Brook in the Town of Jackson. The primary goal of this project is to remove the bridge from the Municipal State Red List as a Municipally Managed State Bridge Aid Program project. The anticipated bridge solution is a beam bridge that is supported on the existing abutments with wingwall replacements. The new superstructure includes a concrete deck and incorporates bridge railing, sidewalk, and curbs. The existing non-structural truss is being refurbished and reattached. The existing pedestrian railing is being replaced with similar railing meeting safety requirements. Responsibilities included providing review and quality control for the conceptual design, plans, and estimate to a final design submission. *Client: Town of Jackson*

Route 108 Pedestrian Improvements, Stratham, NH; 2020-2021. Highway Design Lead. Developed sidewalk extension, crosswalk, commercial entrance modifications, and traffic signal modifications as offsite improvements for a private development project. Responsibilities included design oversight and quality control. *Client: Eaglebrook Engineering and Survey*

Edward J. Roy Drive Pedestrian Improvements, Manchester, NH; 2020. Highway Design Lead. Designed sidewalk, crosswalk, roadway modifications, and traffic signal modifications as offsite improvements for a private development project. Responsibilities included design oversight and quality control. *Client: Z-1 Express*

Culvert Evaluations, Plaistow/Kingston, NH, 2020. Project Manager. Provided two 48-inch diameter RCP culvert evaluations under the NHDOT statewide highway on-call agreement. The assessment evaluated the current culvert conditions and provided recommendations for future maintenance and service life. GPI's VideoRAY ROV was used to perform the underwater inspection of the culverts in order to visually assess their current conditions, avoiding the need to dewater the pipe. Responsible for providing an engineering evaluation of the culvert conditions based upon the inspections. *Client: NHDOT*

Peverley Hill Road Pedestrian Improvements, Portsmouth, NH; 2020. Highway Design Lead. Designed sidewalk, crosswalk, roadway modifications, and a rectangular rapid-flashing beacon (RRFB). Responsibilities included design oversight and quality control. *Client: 4 Amigos, LLC*

Route 302 & NH Route 10 over I-93 Bridge Rehabilitation, Littleton, NH; 2019-2020. Highway Design Lead. Provided bridge design, highway approach design, traffic signal upgrades, maintenance of traffic during construction design, and construction design services. Responsibilities included quality control of highway design and construction cost estimate. *Client: NHDOT*

Route 138 Improvements, Canton-Milton, MA; 2019. Highway Design Lead. Providing comprehensive planning, design, and construction stages for a ten-mile portion of State Route 138 through the towns of Milton and Canton. The project focused on addressing known safety issues at several HSIP locations as well as to providing a "complete street" approach to the corridor for enhanced mobility for pedestrians and bicyclists. The project explores buffered bike lanes, separate multi-use sidewalks, traditional bike shoulders, and an assessment and reconstruction of 12 signalized intersections and a major highway interchange. Extensive planning and public outreach are anticipated as well as roadway drainage enhancements, structural retaining walls, environmental permitting, civil/highway construction, and structural modifications to the Route 138 bridge over I-95. Responsible for conceptual design of intersections and highway interchanges and public hearing participation. *Client: MassDOT*

Pre-GPI Project Experience

Route 24 and MA Route 140 Interchange Reconstruction, Taunton, MA; 2018-2019. Lead Highway Engineer. Design of full interchange reconstruction including 2.5 miles of highway reconstruction, two reconstructed bridges, temporary traffic control design, and five proposed signalized intersections. Close coordination with two adjacent projects for the South Coast Rail extension. *Client: MassDOT*

Route 4 Reconstruction, Madrid and Phillips, ME; 2016-2019. Project Manager. Four miles of highway reconstruction and widening along an important salmon spawning river. Optimized the roadway design to minimize impacts to the adjacent slopes and river. The project includes two realigned and reconstructed bridges. *Client: MaineDOT*

US Route 302 Reconstruction (WIN 17280.10), Fryeburg, ME; 2016-2019. Project Manager. Developed urban design through the plan impacts complete stage including reconstructed pavement, sidewalk, on-street parking, traffic signals, and highway drainage. Employed practical deign to minimize the number of proposed catch basins, match existing building sills, and create positive drainage. *Client: MaineDOT*

I-295 Bridge over I-95, West Gardiner, ME; 2017-2018. Lead Highway Engineer. Rehabilitation of the Exit 103 Bridge over the Maine Turnpike in the Town of West Gardiner. Work included bridge, abutment and pier widening, concrete deck replacement, substructure modifications and repairs, approach work and paving, guardrail, bridge rails, and maintenance of traffic. *Client: Maine Turnpike Authority.*

I-95 Exit 130 Northbound On Ramp, West Gardiner, ME; 2017-2018. Project Manager. Conceptual plan design, traffic study, memo, and estimate for on-ramp widening from one to two lanes and extending acceleration area and taper. *Client: Maine Turnpike Authority*

Route 100/26 Infrastructure Improvements, Falmouth, ME; 2015-2019. Project Manager. Provided design services for highway reconstruction and widening; proposed sewer, water, and natural gas; landscaping; lighting; sidewalk; bike lanes; and two signalized intersections for one of the largest LPA projects in the state. The project included a neighborhood planning study for the town, and the goal of these infrastructure improvements is to create a neighborhood atmosphere and spur development. *Client: Town of Falmouth*

US Route 1 On Ramp, Belfast, ME; 2015-2019. Project Manager. Reconstruction of on ramp to US Route 1 to improve safety (HSIP). Developed alternatives and brought preferred design to final design. Design included drainage, weaving analysis, lighting, overhead sign structure, and grading. *Client: MaineDOT*

US Route 302 Reconstruction, Fryeburg and Bridgton, ME; 2014- 2019. Project Manager. Twelve miles of full highway reconstruction and widening from the New Hampshire state line to the east to add paved shoulders, correct deficiencies in pavement structure, improve subsurface and surface drainage, increase roadway and intersection safety, and increase ride quality. This project included the reconstruction and realignment of four bridges, numerous intersections, sidewalk, on-street parking, and drainage. *Client: MaineDOT*

New I-95 Interchange (Exit 124), Waterville and Sidney, ME; 2015-2017. Project Manager. New full-service interchange funded by a public-private partnership to spur economic development. Performed design in accelerated manner to meet DOT budgetary deadlines. Developed pier protection on I-95 and designed interchange to accommodate future widening of Trafton Road. *Client: MaineDOT*

US Route 1, Falmouth, ME; 2013-2017. Highway Engineer. Repaving and adjusting lane use along Route 1 including the addition of shared-use paths, signage, lighting, and placing utilities underground. Handled design exceptions with MaineDOT, quality control based upon MaineDOT standards, sign plan, and undergrounding of utilities. *Client: Town of Falmouth*

Mechanic Street/US Route 4 Reconstruction; Lebanon, NH; 2014-2015; Highway Design Lead. Complete streets improvements to Mechanic Street in order to improve safety and mobility for all types of transportation. Responsibilities included eight roadway concepts and ten intersection concepts for the corridor including roundabout concepts for two intersections and a dual/connected roundabout concept for I-89/Mechanic Street interchange. Gathered public input and refined alternatives. Developed two rail trail access concepts. Supervised junior engineer's design work. *Client: City of Lebanon*

Route 236 and Depot Road Intersection, Eliot, ME. 2014-2015. Project Manager. Preliminary design of intersection to widen the Route 236 intersection and reconfigure the Cedar Road approach. Developed alternatives for a two-lane roundabout and a widened signalized intersection with traffic signal. *Client: MaineDOT*

Bridge Rehabilitation of Eleven Bridges over the Long Island Expressway (I-495), Suffolk and Nassau Counties, NY; 2013-2015. Lead Highway Engineer. Developed highway approach design and maintenance of traffic designs for

rehabilitations of eleven bridges with extremely high traffic levels. *Client: NYSDOT*

I-93 Bridges over the Winnipesaukee River near Exit 20; Northfield and Tilton, NH; 2012-2015. Highway Design Lead. Deck replacement, widening, and other rehabilitation for two 330-foot length bridges. Responsibilities included designing modified northbound and southbound bridge approaches to match proposed bridge profiles and proposed superelevation. Developed traffic control plans involving high-speed median crossovers to facilitate bridge deck replacements and widening of both bridges while minimizing traffic disruption in this heavily traveled area. Provided QA/QC. *Client: NHDOT*

Bowman Brook Culvert; Bedford, NH; 2014. Design Engineer. Replacement of the existing, deteriorated structural steel culvert (8-foot diameter). Responsibilities included developing concepts and preliminary design for culvert replacement concepts. *Client: NHDOT*

Mechanic Street Corridor Study, Lebanon, NH; 2012-2014. Study of intersection and highway alternatives of this gateway into the city center. *Client: City of Lebanon*

Turner Center Bridge, Greene and Turner, ME; 2012-2014. Lead Highway Engineer for design-build team. Reconstruction of 480-foot-long bridge, approaches, and adjacent intersection. Designed and modeled six alignment alternatives to minimize construction cost. Context-sensitive practical design of drainage, guardrail, curbing, and shoulders in vicinity of abutters. *Client: MaineDOT*

Route 25 over the Long Island Expressway (I-495), Riverhead, NY; 2012-2014. Lead Highway Engineer for bridge reconstruction and ramp rehabilitation including drainage replacement and pavement reconstruction. Studied two alternatives for bridge replacement and maintenance of traffic and developed design for construction of preferred alternative. *Client: NYSDOT*

Broad Street Parkway; Nashua, NH; 2012-2013. Highway Designer. Design of 1.3 miles of new roadway and 0.7 miles of roadway reconstruction through Nashua's millyard district for city improvement. Responsibilities included highway design, drainage design, quality assurance/quality control, and construction cost estimate. Developed intersection alternatives: two lane roundabout and signalized intersection options. *Client: City of Nashua*

Route 101A Corridor Study; Milford, Merrimack, and Nashua, NH; 2012-2013. Highway Designer. Studied roadway widening and intersection improvements for the corridor. Responsibilities included conceptual design for roadway widening (up to ten lanes), limited access highway ramp, and intersection alternatives, including a two-lane roundabout alternative. *Client: NHDOT*

I-295 Exit 15 Interchange and Park and Ride Facility, Yarmouth, ME; 2012-2013. Lead Highway Engineer. Highway interchange reconstruction (realigned ramps and widened Route 1); new park and ride facility designed with stormwater treatment areas and future expansion of bus or rail service; highway lighting; pedestrian and bicycle facilities along Route 1; and soil nail wall utilized to relocate off-ramp between existing bridge abutment and pier. *Client: MaineDOT*

Exit 44 and I-295 Open Road Tolling Conversion, Scarborough, ME. Quality Control Engineer. Performed quality control for the preliminary design of the I-295 open road tolling conversion project in Scarborough. Work consisted of replacing the existing toll plaza, construction of two northbound and two southbound open road tolling (ORT) lanes, and two northbound and two southbound cash/E-ZPass lanes. *Client: Maine Turnpike Authority*

Sagamore Rotary Grade Separation, Bourne, MA; 2002-2005. Highway interchange to replace a highly traveled rotary at the northern entrance to Cape Cod. *Client: MassDOT*

SECTION 6:

APPENDIX

Mark J. Debowski, PE, LPA

PROPOSED PROJECT ASSIGNMENT: Project Manager

EDUCATION:
MBA/2020
BS/2000/Civil Engineering
BA/2000/Liberal Arts/Engineering

REGISTRATIONS:
2005/Professional Engineer/ME #10940
2006/Professional Engineer/PA #73762
2012/Professional Engineer/NH #13899
2018/Professional Engineer/MA #40086
NHDOT LPA Certification #1900
MaineDOT LPA Certification

YEARS WITH FIRM: *2*
TOTAL YEARS' EXPERIENCE: *16*

COURSEWORK/TRAINING:
MaineDOT ADA Compliance (Co-Taught) / 2019
TRB Geometric Highway Design Process for the 21st Century /2017
FHWA Performance Based Practical Design / 2016
FHWA Intersection and Interchange Geometrics Workshop / 2016
FHWA 3D Engineered Models for Construction Workshop / 2014

Project Experience

Maine Route 100/26 Infrastructure Improvements, Falmouth, Maine; 2015-2019. LPA Project Manager. One the largest and most complex LPA projects completed recently in Maine at a construction cost of $12 million. Highway reconstruction and widening; proposed sewer, water, and natural gas; landscaping; lighting; designed improved experience for all road users; two signalized intersections. The project included a neighborhood planning study for the Town, and the goal of these infrastructure improvements is to create a neighborhood atmosphere and spur development. *Client: Town of Falmouth, Maine*

US Route 4 Culvert Replacement Study, Enfield, NH; 2019-2020. Project Manager. Engineering study for evaluating replacement alternatives for an existing box culvert. Mark managed all aspects of the study including alternatives analysis, construction traffic control analysis, preliminary highway and structural design, hydrologic and hydraulic analyses, report writing, cost estimating, and environmental evaluation. *Client: NHDOT*

NH Statewide Rail Trail Plan, NH; 2020-Present. Project Manager. Update the 2005 State Trails Plan to ensure preservation and integrity of the state-owned rail corridors, provide direction for future development, define the role of the DOT in the preservation of state-owned rail corridors, determine the best way to maximize the return on investment in rail corridor assets, and determine how to engage towns, cities, and private rail trail organizations. Mark is managing the plan development and extensive communication and coordination with NHDOT and various stakeholders including an advisory committee. *Client: NHDOT*

Route 38 Improvements, Canton-Milton, MA; 2019-Present. Highway Design Lead. Providing comprehensive planning, design and construction stages for a 10-mile portion of State Route 138 through the towns of Milton and Canton. The project explores buffered bike lanes, separated multi-use sidewalks, traditional bike shoulders, sharrows and an assessment and reconstruction of 12 signalized intersections. *Client: MassDOT*

Route 302 & NH Route 10 over I-93 Bridge Rehabilitation, Littleton, NH; 2019-Present. Highway Design Lead. Highway preservation and maintenance of Bridge No. 187/065. *Client: NHDOT*

US Route 302 Reconstruction, Fryeburg and Bridgton, Maine. 2012-2019. Project Manager. 13 miles of urban and rural highway reconstruction in three phases. Included highway realignment, highway widening, drainage, intersection design, pedestrian and bicycle facilities, and on-street parking. *Client: MaineDOT*

MA Route 24 and MA Route 140 Interchange Reconstruction, Taunton, MA; 2018-2019. Lead Highway Engineer. Full interchange reconstruction including 2.5 miles of highway reconstruction, two reconstructed bridges, temporary traffic control design, and five proposed signalized intersections. *Client: MassDOT*

GPI

Stephen Langevin, PE

PROJECT ASSIGNMENT:
Bridge Lead

EDUCATION:
BS/2001/Civil Engineering

REGISTRATIONS:
2006/Professional Engineer/NH #11933
FHWA Certification for Inspection of Fracture Critical Steel Bridges/2009
FHWA Certification for Safety Inspection of In-Service Bridges/1993

Project Experience

Route 302 & NH Route 10 over I-93 Bridge Rehabilitation, Littleton, NH; 2019-Present. Project Manager. Design and construction for preservation and maintenance of the Bridge. No. 187/065 carrying US Route 302 & NH Route 10 over I-93. Responsibilities include project management and reviewing structural design, plan production, estimate and specifications for the bridge.*Client: NHDOT*

I-293 & NH101 Bridge Rehabilitation, Bedford-Manchester, NH; 2016-2020. Project Manager. Engineering design and construction for the rehabilitation of the "red listed" eastbound and westbound bridges carrying I-293 over the Merrimack River. Responsibilities included managing and reviewing structural design, plan production, quantity estimates, specifications and construction services support for the bridges. *Client: NHDOT*

Route 16 Bridge over Ellis River, Jackson, NH; 2015-Present. Lead Structural Engineer. Design and construction for the rehabilitation of the "red listed" bridge (Br. No. 144/056) carrying NH Route 16 over the Ellis River. Responsibilities included managing and reviewing structural design, plan production, quantity estimates, specifications and construction services support for the bridge. *Client: NHDOT*

Valley Cross Road Bridge Rehabilitation, Jackson, NH; 2018-Present. Project Manager. Design for the rehabilitation of the Municipal "Red Listed" bridge carrying Valley Cross Road over Wildcat Brook. Responsibilities include project management and reviewing structural design, plan production, and specifications for the bridge. *Client: Town of Jackson*

Steven Babalis, PE, PTOE

PROJECT ASSIGNMENT:
Highway Lead

EDUCATION:
BS/2006/Civil Engineering

REGISTRATIONS:
2006/Professional Engineer/NH #11933
2021/Professional Traffic Operations Engineer/# 5135

COURSEWORK/TRAINING:
NHI Intersection Safety Workshop/2014
NHI Road Safety Design/2013
NHI Highway Design: Applying Flexibility & Risk Management/2011

Project Experience

US Route 4 Culvert Replacement Study, Enfield, NH; 2019-2020. Traffic Engineer. The project is an engineering study for evaluating replacement alternatives for an existing box culvert. The study included an in-depth construction traffic control analysis that assessed the maintenance of traffic alternatives, including; alternating one-way traffic control, roadway diversion, and detour alternatives. *Client: NHDOT*

Route 100 Reconstruction, Falmouth, Maine; 2015-2019. Project Engineer. Reconstructing Route 100 from Leighton Road to 200' north of Libby Bridge, adding pedestrian facilities to Leighton Road, Falmouth Road and Route 100, and intersection improvements. One of the largest LPA projects in Maine. Responsibilities included design of roadway, drainage, traffic operations, and signal design. Developed plans, estimate and specs.*Client: Town of Falmouth*

Route 38 Improvements, Canton-Milton, MA; 2019-Present. Project Engineer. Comprehensive planning, design and construction stages for a 10-mile portion of State Route 138. Responsibilities include overseeing the preliminary design and traffic analysis of the project. *Client: MassDOT*

Route 302 & NH Route 10 over I-93 Bridge Rehabilitation, Littleton, NH; 2019-Present. Highway Engineer. Highway preservation and maintenance of Bridge No. 187/065. Responsibilities included traffic control design and intersection design.*Client: NHDOT*

Timothy Letton, PE

PROJECT ASSIGNMENT:
Principal-in-Charge

EDUCATION:
BS/2005/Civil Engineering

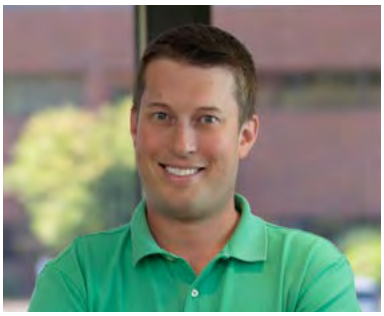
Project Experience

Statewide On-Call Highway Engineering Services, Various Locations, NH: 2019-Present. Principal-in-Charge.On-call engineering for highway design and related technical/professional consulting services for various projects located throughout the State. *Client: NHDOT*

Route 302 & NH Route 10 over I-93 Bridge Rehabilitation, Littleton, NH; 2019-2020. Principal-in-Charge. Design and construction services relative to the preservation and maintenance of the Bridge. No. 187/065 that carries US Route 302 & NH Route 10 over I-93 *Client: NHDOT*

Statewide On-Call Bridge Design, Various Locations, NH; 2018-Present. Principal-in-Charge. Engineering services for bridge design and related technical/ professional consulting services on demand for various projects at various locations throughout the State. *Client: NHDOT*

Christopher Stairs, PE, LPA



PROJECT ASSIGNMENT:
Highway Engineer

EDUCATION:
BS/2008/Civil Engineering

Project Experience

Route 16 Bridge over Ellis River, Jackson, NH; 2016-Present. Project Engineer. Rehabilitation of the "red-listed" bridge carrying NH Route 16 over the Ellis River. Responsible for completing the preliminary design plans and estimate. *Client: NHDOT*

Reconstruction of Maplewood Avenue, Portsmouth, NH; 2015-Present. Project Manager. Roadway and utility reconstruction project runs along Maplewood Avenue from Woodbury Avenue to the North Mill Pond. Responsibilities include serving as the primary contact for the client, reviewing pay requisitions, providing field changes, reviewed changes orders and requests for information and managed the inspection staff. *Client: City of Portsmouth.*

Tuscan Village Redevelopment; Salem, NH; 2019–Present. Project Engineer. Transportation engineering and consulting for the Tuscan Village redevelopment on a portion of Rockingham Park in Salem. Responsibilities included preliminary drainage analysis and review of the final drainage system design. *Client: Joseph Faro*

Kimberly Armstrong, PE

PROJECT ASSIGNMENT:
Bridge Engineer

EDUCATION:
BS/2002/Civil Engineering

AS/2000/Architectural Engineering Technology

Project Experience

Pleasant Street Bridge Rehabilitation, Natick, MA; 2016-2017. Project Manager. Designed a rehabilitation plan for a four-span, dry-laid masonry arch carrying Pleasant Street over the Charles River in Natick. Responsible for checking the arch capacity calculations, the overall design of the rehabilitation and the construction documents associated with the rehabilitation as well as the construction oversight of the bridge elements. *Client: Town of Natick*

Acushnet Road Small Bridge Replacement, Mattapoisett, MA; 2017-Present. Project Manager. Preliminary and final design services, as well as construction services, related to the replacement of the Acushnet Road Bridge over Branch of Mattapoisett River. Responsibilities include coordination with the client and sub consultants and oversight/ quality control for the job. *Client: Town of Mattapoisett*

Locust Street Bridge Repairs, Freetown, MA; 2016-2017. Project Manager. preparing and submitting a "Book" project that fully detailed the work elements required for the contractor to complete the project. Responsible for overall quality control and oversight of the project. *Client: Town of Freetown*

GPI

Joseph P. Johnson, PE, PTOE, LPA

PROJECT ASSIGNMENT:
Traffic Engineer

EDUCATION:
BS/1998/Civil Engineering
BA/1998/Liberal Arts

Project Experience

Lafayette Road/Middle Street On-Street Bicycle Facilities, Portsmouth, NH; 2014-2018. Project Director/Manager. Preliminary and final design of buffered and protected bicycle lanes along Lafayette Road/Middle Street (0.90-mile length). Responsibilities included project management, design of RRFB's, pavement marking and signing design, accessibility design, the development of contract documents and overall project coordination with the City. *Client: City of Portsmouth, NH*

Intersection Improvements at Andrew Jarvis Drive and U.S. Route 1, Portsmouth, NH; 2015-2018. Project Director/Manager. Conceptual, preliminary and final design for safety improvements at this intersection which serves as the driveway to the City's High School. Responsibilities included project management, all aspects of design, the development of contract documents and overall coordination with the City. *Client: City of Portsmouth, NH*

Town Center District Improvement Plan, Stratham, NH; 2013–2015. Project Manager. Preliminary design report to assist the town with its master plan. Responsibilities included traffic analysis and report preparation. *Client: Town of Stratham*

Timothy Whitney, PE, LPA

PROJECT ASSIGNMENT:
Highway Engineer

EDUCATION:
BS/2013/Civil Engineering

Project Experience

US Route 4 Culvert Replacement Study, Enfield, NH; 2019-2020. DesignEngineer. Engineering study for evaluating replacement alternatives for an existing box culvert. Responsible for conceptual highway design, cost estimate, and temporary traffic control layout. *Client: NHDOT*

Route 100 Reconstruction, Falmouth, Maine; 2017. Design Engineer. Reconstructing Route 100 from Leighton Road to 200' north of Libby Bridge, adding pedestrian facilities to Leighton Road, Falmouth Road and Route 100, and intersection improvements. One of the largest LPA projects in Maine. Aided in the public hearing process, utility coordination and plan set production *Client: Town of Falmouth*

Route 38 Improvements, Canton-Milton, MA; 2019-Present. Design Engineer. Comprehensive planning, design and construction stages for a 10-mile portion of State Route 138. Responsibilities included intersection layout, plan development, and cost estimating. *Client: MassDOT*

Robert Sheppard, PE

PROJECT ASSIGNMENT:
Bridge Engineer

EDUCATION:
MS/2015/Civil & Structural Eng.
BS/2011/Civil Engineering
AS/2007/Computer Aided Design

Project Experience

Route 302 & NH Route 10 over I-93 Bridge Rehabilitation, Littleton, NH; 2019-2020. Structural Engineer. Design and construction relative to the preservation and maintenance of the Bridge. No. 187/065 that carries US Route 302 & NH Route 10 over I-93. Responsibilities include expansion joint design, plan production, and the review of reinforcement schedule for the bridge. *Client: NHDOT*

Route 16 Bridge Replacement, Jackson, NH; 2015-Present. Structural Engineer. Design and construction for the rehabilitation of the "red listed" arch bridge carrying NH Route 16 over the Ellis River. Responsibilities include structural design, plan production, quantity estimates and specifications for the bridge. *Client: NHDOT*

Valley Cross Road Bridge Rehabilitation, Jackson, NH; 2018-Present. Structural Engineer. Design services for the rehabilitation of the bridge carrying Valley Cross Road over Wildcat Brook. Responsibilities include structural design, plan production, quantity estimates, and review of reinforcement schedule for the bridge. *Client: Town of Jackson*

GPI

Valerie Hrabal, PE, PP

PROJECT ASSIGNMENT: Hydraulics/Hydrology

EDUCATION:
MS/1983/Civil Engineering
BS/1979/Civil Engineering

Project Experience

US Route 4 Culvert Replacement Study, Enfield, NH; 2019-2020. Hyrdology & Hydraulics Team Leader. Performed hydrology and hydraulics studies for evaluating replacement alternatives for an existing 6' x 9' box culvert using Hydro CAD, HY-8, and FHWA SMS-SRH-2D software for developing inflow hydrology/hydrographs, culvert design, and 2D stream hydraulics analysis respectively. Performed scour analysis using HEC-18, NCHRP 24-20 (abutment scour) and FHWA Hydraulics toolbox. *Client: NHDOT*

Interstate I-90 (Mass Turnpike) over Route I-95/128, MBTA/CSX and Charles River Bridge Replacements, Newton/Weston MA; 2014-Present. Hyrdology & Hydraulics Team Leader. Preliminary design services for the replacement of multiple structures along I-90, most notably the bridge that carries I-90 and I-95 over the Charles River. Performed hydrology and hydraulic analysis for a new bridge over the Charles River using FEMA hydrology and HEC-RAS 1D steady state backwater analysis. Performed scour using MassDOT scour equations and NCHRP 24-20 (abutment scour). *Client: MassDOT*

Jeffrey Bradford, PE, LLS

PROJECT ASSIGNMENT: Survey/ROW

EDUCATION:
BS/1986/Civil Engineering

Project Experience

Reconstruction of Maplewood Avenue & Adjacent Areas, Portsmouth, NH; 2017-2019. Survey/ROW Director. Roadway and utility reconstruction running along Maplewood Avenue from Woodbury Avenue to Cutts Street. Responsibilities included research of roadway layout, easements, and property. Placed layout, property, and easement lines in CAD with owner information, oversaw project survey. Prepared five easement plans and easement documents. *Client: City of Portsmouth*

Route 16 Bridge Rehabilitation, Jackson, NH; 2016-2019. Survey/ROW Director. Preliminary and Final Design for the rehabilitation of the "Red Listed" bridge carrying NH Route 16 over the Ellis River. Responsibilities included research of roadway layout, easements, and property. Placed layout, property, and easement lines in CAD with owner information, coordinated with NHDOT on project survey. *Client: NHDOT*

Samuel Campbell

PROJECT ASSIGNMENT: Environmental

EDUCATION:
BS/2017/Environmental Science

Project Experience

Tuscan Village Redevelopment; Salem, NH; 2019–Present. Environmental Scientist. Transportation engineering and consulting services for the Tuscan Village redevelopment of the former Rockingham Park racetrack in Salem. Responsibilities include preparation and submission of a Categorical Exclusion and Request for Project Review by the New Hampshire Department of Historical Resources. *Client: Joseph Faro*

Improvements to Routes 5/10, Deerfield/Whatley, MA; 2018-Present. Environmental Scientist. PS&E design services for the reconstruction and related improvements of approximately 1.1 miles of Route 5. Responsibilities include preparation and submission of a Notice of Intent in the Town of Deerfield and Request for Determination of Applicability in the Town of Whatley. *Client: MassDOT*

Carolyn Radisch, AICP

PROJECT ASSIGNMENT: Public Engagement

EDUCATION:
MS/1995/City and Regional Planning
MS/1995/Civil & Trans. Eng.
BS/1983/Environ.Design

Project Experience

On Call Street Design and Planning Services, Boston, MA; 2017- Present. Senior Transportation Planner. This assignment involves working with the City's team to define complete street design improvements for reconstruction of identified City streets. Street design projects have included pedestrian amenities, traffic calming, protected bicycle lanes, enhanced transit stops, public art and streetscape amenities. *Client: City of Boston Department of Public Works.*

Pedestrian and Bicyclist Improvements, Hanover, NH; 2010-2018 Project Manager. For several years, advised the Town's Bike and Pedestrian Committee on planning and design projects including Safe Routes to School Travel Plan. Responsibilities included conceptual design, public presentations, plan documentation, public outreach and coordination between the town, college and transit agency. *Clients: Town of Hanover, Dartmouth College and Advance Transit*

GPI

PROJECT EXPERIENCE: MUNICIPAL/LOCAL PUBLIC AGENCY PROJECTS

GPI has a long history of providing engineering, planning, and design services to local public agencies throughout New England. GPI strives to develop long-term relationships with our clients to understand and help them achieve their goals. Our project team has completed or is currently working on projects with numerous local public agency clients. GPI is also familiar with the LPA process and has worked on several LPA projects in New Hampsphire. Currently, GPI has eight engineers and inspectors who hold current LPA Training Certification.

Valley Cross Bridge | Jackson, NH

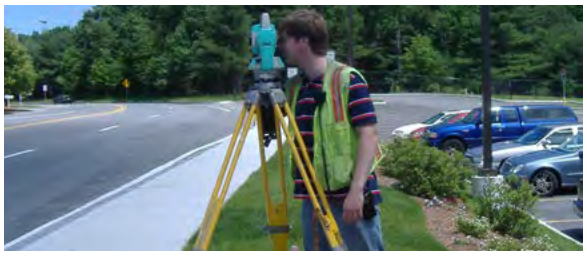
GPI is providing design services for this LPA project that invovles the rehabilitation of the deteriorated bridge that carries Valley Cross Road over Wildcat Brook. GPI developed concepts for the town and is designing the preferred option that allows for widening the bridge, maintains the truss structure and provides suitable accommodation of pedestrians.

Client: Town of Jackson
Julie Atwell, Town Administrator, 603-383-4223 X101

Lafayette Road/Middle Street | Portsmouth, NH

GPI completed study, preliminary design, final design, project bidding assistance, and construction engineering services in support of the creation of buffered and protected bicycle lanes along Lafayette Road/Middle Street. The goal of this LPA project was to provide a safe and usable route for bicyclists in concert with the city's complete streets policies and *Bicycle and Pedestrian Master Plan*. GPI recommended that buffered and protected bicycle lanes be pursued as they provide the most flexibility to meet the needs of all users and provide a dedicated, safe facility.

Client: City of Portsmouth
Contact: Raymond Pezzullo, Asst. City Engineer, 603-766-1755



Kingston Road Survey | Exeter, NH

GPI performed the field survey and right-of-way research for this shoulder widening project along Kingston Road (Route 111) in Exeter. This is an LPA project and plans were reviewed by New Hampshire Department of Transportation. GPI also prepared the required easement plans for recording.

Client: CMA Engineers, Inc.
Contact: Jason J. Beaudet, PE, 603-627-0708

Town Center Improvement Plan | Stratham, NH

GPI prepared the engineering study to assist the town for this LPA project. The report provided vehicular, pedestrian, and bicycle volumes; operations; and potential roadway geometric improvements within the town center district to address safety and intersection capacity needs. Conceptual alternatives consisted of roundabouts and signalized configurations and the impacts of each alternative were evaluated in terms of capacity, safety, right-of-way, and construction and maintenance cost while aiming to maintain the historic character by improving and balancing pedestrian and bicycle mobility and vehicular operations.

Client: Town of Stratham
Contact: Travis Austin, Town Planner, 603-772-7391

GPI

PROJECT EXPERIENCE: ROADWAY DESIGN

From simple roadway or sidewalk design projects to complex highways and interchanges, GPI continues to enhance transportation infrastructure while increasing safety for all modes of travel on roadways throughout New England. The evolution of highway design began with CADD and 3D models and the technology is continually changing. However, the underlying principles remain the same: highly trained engineers designing quality work to satisfy client needs. GPI has the ability to adjust to various types of projects and produce a design that is not only of the highest quality, but is also constructible. With a growing focus on complete streets design, the combined staff of GPI engineers, planners, landscape architects, and scientists are incorporating design elements such as bicycle lanes, green infrastructure, bus rapid transit facilities, and enhanced pedestrian zones to increase safety and foster a greater sense of community.

Maplewood Avenue Reconstruction | Portsmouth, NH

This roadway and utility reconstruction project runs along Maplewood Avenue from Woodbury Avenue to Cutts Street and includes adjacent neighborhoods for a total project length of two miles. Improvements include pavement reclamation, new sidewalk, buffered bicycle lanes, curbing, drainage, traffic calming, raised intersections, storm water BMPs, landscaping and water/sewer design. This $5.9 million project was recently completed.

Client: City of Portsmouth
Contact: Raymond Pezzullo, Asst. City Engineer, 603-766-1755

Reconstruction of Route 109 | Medway, MA

GPI provided the design and prepared the preliminary and final plans, specifications and estimate for the rehabilitation of Route 109 (Main Street) in Medway. The project involved reconstruction of existing pavement, installation of new granite curbing and cement concrete sidewalks, improvements to the drainage system, upgrading and capacity improvements at several signalized intersections, and the planting of shade trees and placement of ornamental street lights and other streetscape appurtenances along the corridor. GPI also furnished advice during the project's construction phase.

Client: Town of Medway
Contact: David D'Amico, Public Works Director, 508-533-3275

Water Street Reconstruction | Williamstown, MA

GPI assisted in the preparation of plans, specifications, and cost estimate (PS&E) for the reconstruction of a portion of Water Street (Route 43). The design widened Route 43 to provide on-street parking on one side and five-foot shoulders for bicycle traffic. Streetscape improvements included new granite curbing, cement concrete sidewalks with ADA-compliant wheelchair ramps, and pedestrian crossings at several locations.

Client: Town of Williamstown
Contact: Timothy Kaiser, Public Works Superintendent, 413-458-3500

Bruce Freeman Rail Trail | Acton, MA

GPI is providing design and construction services for an eight-mile multi-use recreational trail along a former railroad line in Acton, Concord, Carlise, and Westford. The project includes a new variable width paved asphalt multi-use rail trail, an adjacent stone dust trail, trail pavement markings and signing, passively actuated flashing beacons at trail/roadway crossings, design of new pedestrian bridges over state routes, new prefabricated pedstrian bridge and tunnel, rehabilitation of seven existing bridges along the trail, drainage improvements, earthwork, landscaping, and environmental permitting.

Client: MassDOT
Contact: Matt Hopkinson, Project Manager, 857-368-6154

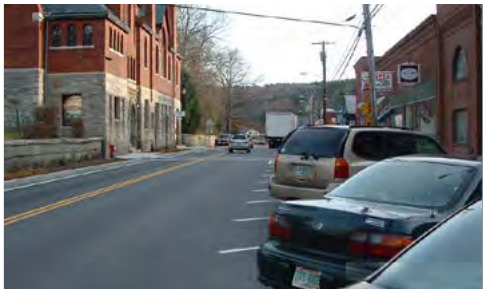
PROJECT EXPERIENCE: TRAFFIC ENGINEERING

GPI has expertise in all areas of intersection analysis, concept development, and design to improve safety and increase capacity. In addition to the collection of traffic data, and its analysis and evaluation utilizing Synchro/SimTraffic, VisSim, aaSIDRA and/or HCS, GPI offers a variety of vehicular, pedestrian, and bicycle control solutions ranging from traditional unsignalized or signalized control to the design of modern roundabouts. GPI utilizes a variety of complete street design elements that are intended to calm vehicle travel speeds. We have experience with many design features to provide traffic calming, edge line striping, bicycle lane striped buffer, protected bicycle lanes using on-street parking, vertical curbing, curb extensions, enhanced crosswalks, driver speed feedback signs, pedestrian refuge islands, and raised intersections.

Water Street Roundabout | Plymouth, MA

GPI provided design and engineering services for Phase I improvements to Water Street in Plymouth, MA. The project included the installation of a modern, single-lane roundabout at the intersection of Water Street and South Park Avenue. The new modern roundabout replaces an older traffic circle and is fully operational with three, full-access legs, with the fourth leg designated as an exit-only lane. Splitter islands were created at three of the four approaches to enhance pedestrian and bicycle access through the intersection.

Client: Town of Plymouth
Contact: Jonathan Beder, DPW Director, 508-830-4162 x 12105



Sidewalk Improvements | Wilton, NH

GPI provided design services for this Transportation Enhancement (TE) streetscape project on Main Street along the downtown area of Wilton. The project involved sidewalk improvements with some curb realignment, streetscape features such as brick pavers, ornamental lighting and landscaping, and traffic-calming devices, and layout of on-street parking along the downtown area.

Client: Town of Wilton
Contact: Paul Branscombe, Former Town Administrator, 603-487-2500 x121

Arcade Avenue | Seekonk, MA

This safety improvement project realigned the Arcade Avenue approach to the intersection and provided a new traffic control signal. The intersection had been the location of numerous accidents. The existing stone arch/concrete bridge was extended to provide additional pavement for a turning lane and bicycle use. Sidewalks, drainage, and pavement markings and signing were also part of the project.

Client: Town of Seekonk
Contact: David Cabral, PE, Town Engineer, 508-336-7407

Andrew Jarvis Drive | Portsmouth, NH

GPI provided conceptual, preliminary and final design services for safety improvements at this intersection, which serves as the driveway to the city's high school. The project widens Andrew Jarvis Drive to have two exiting lanes and widens U.S. Route 1 to provide an exclusive right-turn lane into the school. The project includes a new fully-actuated traffic signal, pavement reclamation, cold-plane and overlay, drainage upgrades, sidewalk, curbing, buffered bicycle lanes, and a 'bicycle box' at the signalized intersection. GPI also provided construction inspection services for this $1.1 million project, which was completed prior to the start of the 2018-2019 school year.

Client: City of Portsmouth
Contact: Raymond Pezzullo, Asst. City Engineer, 603-766-1755

PROJECT EXPERIENCE: BRIDGE REHABILITATION

GPI has worked on numerous bridge rehabilitation projects for both state transportation departments and municipal clients. Our experience gained over a large number of projects and varied structure types enables us to propose innovative and cost-effective methods to rehabilitate structures that may have not been considered salvagable.

Route 16 Bridge over the Ellis River | Jackson, NH

GPI provided design services for the rehabilitation of the "Red Listed" bridge carrying NH Route 16 over the Ellis River in Jackson, a two-span, 140-foot-long reinforced concrete frame supported by a concrete pier. The project involved bridge inspection, material testing, traffic control during staged construction, bridge design, and design of the approach roadways. The project also improves sight lines associated with side street access for overall vehicle safety. One-way alternating traffic was implemented during staged construction via a temporary traffic signal.

Client: New Hampshire Department of Transportation
Contact: Phillip Brogan, PE, Project Manager, 603-271-7408

Bridge Master Plan | Framingham, MA

GPI provided design and consulting services to complete a master plan for all town-owned bridges with spans under 20 feet. GPI inspected and provided a full NBIS-level inspection report on bridges with a span length between 10-20 feet and a preliminary review of all bridges spanning between 5-10 feet, as well as five pedestrian bridges. GPI also provided an overall review of town-owned bridges over 20 feet that are inspected by the MassDOT but where the maintenance responsibility rests with the town. A report of the inspection findings was prepared with a narrative of the findings and recommendations for maintenance, repair, and/or rehabilitation/replacement.

Client: City of Framingham
Contact: Bill Sedewitz, Chief Engineer, 508-532-6040

I-293 & NH101 Bridge Rehabilitation | Bedford-Manchester, NH

GPI provided engineering design services for the rehabilitation of the eastbound (EB) and westbound (WB) "Red Listed" bridges carrying I-293/NH101 over the Merrimack River. Completed a bridge inspection using traditional hands-on techniques, under bridge inspection units, and also utilized unmanned aerial vehicles (drones). In addition to the bridge inspection, evaluated and tested the steel bridge coatings to determine the need for investment. As a result, provided a recommendation report outlining repairs. Also investigated the traffic control issues for this roadway. Currently providing construction phase services.

Client: New Hampshire Department of Transportation
Contact: Robert Landry, 603-271-2731

Clement Street Bridge | Northampton, MA

GPI provided design services for structural repairs to the Clement Street Bridge over the Mill River in Northampton. An inspection of the bridge revealed deficiencies in various truss members critical to the integrity of the truss. The lower chord members were eye bar plates that had deteriorated. The work for this project entailed the replacement of the lower eye bar plates by disassembly of the truss panel points while maintaining the truss integrity. Also provided on-site resident engineering services. The actual construction involved a temporary truss support system, field drilling of holes, and miscellaneous sidewalk repairs.

Client: City of Northampton
Contact: David Veleta, City Engineer, 413-587-1574

PROJECT EXPERIENCE: CULVERT DESIGN

GPI is experienced in designing culverts, both for structural and hydraulic capacity, as well as to address scour concerns. Culverts, which are typically buried structures, are critical elements of a highway in that they have the ability to safely carry water, whether from surface run-off or streams, under the roadway and without disrupting traffic. Culverts can be constructed of pipe (reinforced concrete, corrugated metal or HDPE plastic primarily) or they can be constructed from a reinforced concrete box culvert or rigid frame. The shape and size of the culvert is typically designed to meet the structural requirements of the roadway, as well as the hydraulic requirements of the waterway that will be using the culvert as a path under the roadway.

Culvert Study| Enfield, NH

GPI is provided an assessment of an open-bottom culvert conveying tributary to the Mascoma River under US-4 in poor condition as part of the Route 4 highway project. The assessment looked at various hydraulic openings including ones to pass record storms and meet stream crossing guidelines to recommend the best solution. Profile modifications and traffic management were also included in the recommendations. The assessment determined whether the culvert should be replaced as part of the highway project or as a separate project and assisted in determining the final solution for the site.

Client: New Hampshire Department of Transportation
Contact: James Marshall, Bureau of Highway Design Administrator, 603-271-2731

Culvert Inspection | Plaistow/Kingston, NH

GPI provided two culvert evaluations under the NHDOT Statewide Highway On-Call agreement. The assessment determined whether the culverts need to be replaced as part of the highway reconstruction project or if they can remain in service for another 20 years. Used our VideoRAY ROV to perform underwater inspection of the culverts in order to visually assess their current conditions, avoiding the need to dewater the pipe. Provided an engineering evaluation of the culvert conditions based upon the inspections.

Client: New Hampshire Department of Transportation
Contact: James Marshall, Bureau of Highway Design Administrator, 603-271-2731

Forge Road Bridge | Freetown, MA

GPI provided design services for the replacement of the Forge Road Bridge over the Assonet River. The bridge collapsed during the Spring of 2010 when excessive rain events overtopped the adjacent dam structure and undermined the bridge foundations. The replacement bridge is a precast concrete arch structure with a span of 32 feet and a rise of 8 feet. The roadway alignment was modified slightly. Additional project elements included environmental permitting, right-of-way services, public meetings, and assisting the Town with the FEMA application.

Client: Town of Freetown
Contact: Charles Macomber, Highway Surveyor, 508-664-2359

South Street Bridge | Douglas, MA

Project involved designing the repair of the existing stone arch on the South Street (State Route 96) Bridge over Tinkerville Brook in Douglas. Recent floods had damaged the bridge to the extent that sections have been closed to traffic. The work included localized strengthening of the arch and the adjacent wingwall, scour remediation, and the installation of moment slabs and crash tested barrier.

Client: Town of Douglas
Contact: William Cundiff, PE,Town Engineer, 508-476-4000 x208

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